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Manning Levels of Soviet Ground Forces in Central Europe

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A Research Paper

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A Research Paper

This paper was prepared by [redacted]
of the Office of Soviet Analysis. Comments and
queries are welcome and may be addressed to the
Chief, Theater Forces Division, SOVA, [redacted]
[redacted]

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Manning Levels of Soviet Ground Forces in Central Europe

Key Judgments

Information available
as of 1 March 1984
was used in this report.

Manpower Estimates.

Soviet divisions in Central Europe are not manned in peacetime at or near full wartime strength as has been indicated in previous Intelligence Community estimates. Our analysis shows Soviet motorized rifle divisions are at about 81 to 85 percent of intended wartime strength, and tank divisions at about 86 to 90 percent. These lower percentages reflect both a reassessment of actual personnel strengths as well as an increase in the wartime table of organization that was not matched by a peacetime strength increase.

to reach intended wartime strength, Soviet combat units in Central Europe depend to a greater extent than previously assessed on mobilization of reservists or transfers of active-duty soldiers. We estimate that divisions alone would need 40,000 to 50,000 additional troops, and nondivisional forces at least 60,000 to 70,000. Some Soviet personnel in Central Europe—civilians or transfers from less critical units—could be used to augment forces, but we estimate that even combat units would require some reservists shipped in from the USSR.

Despite the reduced readiness of these divisions, we believe the Soviets consider them capable of fighting in their present condition if circumstances required. Nevertheless, the Soviets' behavior in crises such as Czechoslovakia in 1968 and Afghanistan in 1979 suggests that they would take time to prepare their forces as thoroughly as possible before starting a war with NATO. The Soviets' writings indicate that they expect a period of some days or even weeks of prewar international tension and warning that would allow them time to do so.

We are less certain of the manning of nondivisional units than we are of divisions. Among nondivisional units our uncertainty centers on the service support units because we lack information on their structure and because the presence of civilian employees complicates estimates. Nevertheless, while we are uncertain about the specific numbers, there is evidence that a sizable augmentation from the USSR would be needed to fully man a Soviet wartime support structure in Central Europe.

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SOV 84-10088D
June 1984

Our revised division estimates do little to reduce the discrepancy between Western estimates and Eastern "official figures" on Soviet forces in the Mutual and Balanced Force Reduction (MBFR) negotiations. The new evidence results in a cut of only about 12,000 from the next most recent (1982) estimates of Soviet divisions and only about 2,000 from 1980 division estimates—the last year the Soviets provided figures on their forces. We currently estimate a total of 487,500 Soviet ground forces personnel in Central Europe, whereas the Soviets acknowledge only 404,800, leaving a discrepancy of 82,700. [REDACTED]

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Although the new evidence reduces our estimates of divisions, it gives us greater confidence in the revised estimates. Moreover, by strengthening the evidential base for our divisional manpower figures, the new information makes Eastern tabled figures all the less credible. The increased confidence in our division estimates and some past hints from Soviet representatives in Vienna on their figures on divisions tend to isolate the source of the discrepancy in Soviet forces in the nondivisional categories. Subtracting the revised aggregate division estimate from the figures the Soviets have tabled for all ground forces leaves a number of men in nondivisional forces that is improbably low, even given our uncertainties about nondivisional service support units. [REDACTED]

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In sum, even after all the uncertainties of the manpower estimates are taken into account, the new evidence and the analysis it permits bolster our confidence in our understanding of the general readiness level of Soviet forces in Central Europe and in our estimates that a sizable infusion of personnel would be required to bring the force to its full intended wartime strength. The evidence also strengthens our already strong case that the East has excluded a sizable number of troops from its tabled MBFR figures for Soviet ground forces in Central Europe. [REDACTED]

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Structural Changes in the Forces. In 1979 and 1980 the Soviets undertook a unilateral withdrawal of some units from Central Europe, which was followed by a large-scale restructuring of their forces there. This restructuring involved the expansion and contraction of unit structure, the disbanding of some units, the conversion of others, and the creation of some new units. [REDACTED]

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The pattern of peacetime manning increases and decreases resulting from the combination of restructuring and withdrawal suggests that, when the changes are complete, they will offset each other. This offset pattern

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appears to be by design and may indicate that Soviet forces in Central Europe are operating in peacetime under a manpower ceiling. [REDACTED]

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[REDACTED] a key assumption often applied in assessing observed changes in unit structure—that structural expansion necessarily means increased peacetime manning. Because we depend heavily on indications of structural change to alert us to potential changes in peacetime manning, this evidence may increase the uncertainty in our initial assessments of future changes in Soviet forces. Such uncertainty might reduce the confidence with which intelligence analysts could gauge Eastern compliance with the terms of an agreement on Mutual and Balanced Force Reduction. [REDACTED]

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Contents

	<i>Page</i>
Key Judgments	iii
Introduction	1
Current Estimates: Divisions	1
Recent Evidence	1
The Motorized Rifle Battalion	2
The Artillery Battalion	3
Tank Subunits	3
General Applicability of the Evidence	4
Current Estimates: Nondivisional Forces	4
Combat Units	4
Combat Support Units	5
Service Support Units	6
Nondivisional Forces in Wartime	7
Implications for Mutual and Balanced Force Reduction	7
Change Over Time: Restructuring and Manpower	8
Structural Expansion Without Manpower Increases . . .	9
. . . and With Manpower Increases	9
Structural Contraction	10
Withdrawal	10
Net Effect of Post-1979 Activity on Manpower	10
Monitoring Future Change	13
Implications for Readiness	14
Sources of Mobilization Augmentation	14
Soviet Reservists in Central Europe	15
Transfers From Within Central Europe	15
Augmentation From the USSR	16
Timing Considerations	16
Motivation for Current Manning Practices	16
Appendixes	
A. Soviet Civilians Employed by Soviet Forces in Central Europe	17
B. Potential for Confusion of Some Service Support Manpower With Division Manpower	19

25X1

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Manning Levels of Soviet Ground Forces in Central Europe

Introduction

Our estimates of Soviet ground forces in the MBFR Reduction Area¹ have suffered from uncertainties regarding manning practices. We refer here both to manning levels—the ratio of peacetime assigned strength to wartime authorized strength (see inset for definitions of these terms)—and to accounting practices—how individual soldiers, especially in activities such as training and details, are counted against unit authorizations. These questions are particularly significant in the case of combat divisions, which account for three-fifths of the manpower of Soviet ground forces in Central Europe. These uncertainties were intensified by a major restructuring of the Table of Organization and Equipment (TOE) of Soviet combat forces that began in 1980 and by the unilateral withdrawal in 1979 and 1980 of some Soviet forces.

Information acquired in late 1982 and in 1983, however, together with that previously available, has provided a clearer picture of current and past manning practices of Soviet forces in Central Europe. It also leads us to some tentative conclusions about the net effect of the recent restructuring on peacetime (and intended wartime) manpower. These in turn suggest some implications for future assessments of manpower in relation to structural change and for assessments of the readiness of Soviet ground forces in Central Europe. (See table 1 for a summary of the most recent comprehensive Intelligence Community estimate of these forces and table 2 for a comparison of our current division estimates with previous estimates.)

¹ The MBFR Reduction Area is the territory of West Germany, Belgium, Luxembourg, the Netherlands, Poland, East Germany, and Czechoslovakia. We use the term *Central Europe* to define the eastern part of the MBFR Reduction Area—Poland, East Germany, and Czechoslovakia. It excludes Hungary, where Soviet troops are stationed that would follow similar manning practices but that are not subject to MBFR.

Definition of Terms

Wartime authorized strength (shtat voyennogo vremeni): The strength of a unit fully mobilized for war; the number of positions representing the unit's structure for war.

Peacetime authorized strength (shtat mirnogo vremeni): The strength authorized for peacetime; the number of positions authorized to be filled in peacetime.

Peacetime assigned strength (spisochnaya chislennost): The number of troops actually assigned to the unit, on the unit's roster (also known as roster strength); the number of peacetime authorized positions actually filled in peacetime. This is the strength under discussion in MBFR.

Present-for-duty strength (nalichnaya chislennost): The number of assigned troops who are actually present in the unit and available for duty on a given day. This figure varies daily, as individuals are absent for reasons of leave, illness, temporary duty elsewhere, details, and so forth.

Current Estimates: Divisions

Table 1
US Estimate of Soviet Ground Forces
in the MBFR Reduction Area,
January 1983 ^a

	In Divisions	
Total	487,500	280,700
Group of Soviet Forces, Germany	369,000	205,200
Central Group of Forces (Czechoslovakia)	75,500	55,400
Northern Group of Forces (Poland)	42,500	20,100

Table 2
Ratios of Peacetime/Wartime
Manning in Divisions

Percent

	Motorized Rifle Division	Tank Division
1980 estimate of prere- organized division	93 to 95	93 to 95
1984 estimate of prere- organized division	86 to 90	87 to 92
1984 estimate of postre- organized division	81 to 85	86 to 90

The Motorized Rifle Battalion.

the motorized rifle battalion (see table 3) is authorized 369 soldiers in peacetime, about 70 percent of its intended wartime strength of 530. The number of soldiers authorized in peacetime and the number actually assigned to the battalion varied slightly but in each case the assigned strength closely approximated the peacetime authorized strength.

The principal planned difference between wartime and peacetime manning (both authorized and assigned) in the motorized rifle battalion is in its fighting elements—the motorized rifle companies, the mortar battery, and the antitank, air defense, and grenade launcher platoons. Each of these is manned in

Table 3
Motorized Rifle Battalion
Structure (BTR-equipped) ^a

Echelon	Peacetime Authorized Strength	Wartime Authorized Strength
Battalion	369	530
Headquarters	9	10
Motorized rifle company (3)	75	110
Motorized rifle platoon (3)	19	28
Motorized rifle squad (2)	6	9
Motorized rifle squad (1)	6	8
Machinegun platoon	12	20
Mortar battery	46	66
Antitank platoon	28	42
Air defense platoon	10	16
Grenade launcher platoon	16	26
Signal platoon	12	13
Medical point	6	8
Supply platoon	17	19

^a This is the structure of the motorized rifle battalion after expansion during the restructuring program that began among Soviet divisions in Central Europe in 1980.

peacetime between 60 and 70 percent of intended wartime strength. The battalion's headquarters and its signal, medical, and support platoons are manned in peacetime much closer to full wartime strength.

The Artillery Battalion.

the wartime authorized strength of an artillery battalion equipped with 18 self-propelled howitzers is 250, and its peacetime authorized strength is 204, about 80 percent of wartime. As in the case of the motorized rifle battalion, the roster evidence showed the number actually assigned was approximately the number authorized in peacetime (see table 4). The planned difference between wartime and peacetime manning is largely in the howitzer crews and to a lesser extent at battery headquarters level. Each howitzer is authorized a six-man crew for wartime, but only a four-man crew in peacetime. To be added to each battery for wartime are a deputy battery commander for political affairs, a medical instructor, and a radio telephone operator.

Table 4
Artillery Battalion Structure
(Equipped With 18
Self-Propelled Howitzers)

Echelon	Peacetime Authorized Strength	Wartime Authorized Strength
Battalion	204	250
Headquarters	11	12
Headquarters platoon	26	26
Reconnaissance post	5	5
Command vehicle	6	6
Command-staff vehicle	7	7
Command and control section	7	7
Support platoon	32	32
Motor transport section (2)	10	10
Maintenance section (2)	4	4
Food service section	3	3
Howitzer battery (3)	45	60
Howitzer firing platoon (2)	13	19
Howitzer (3)	4	6

Tank Subunits.

subunits are manned at full strength in peacetime. This judgment is also consistent with the specialized nature of the skills involved compared with those of riflemen or artillery crewmen. A tank cannot be efficiently operated with less than a full crew.

On the other hand, we believe a tank division's infantry and artillery subunits would have the same order of shortfall indicated in the rosters we have from other infantry and artillery units. This undermanning, together with some undermanning of divisional support units comparable to what we estimate

for motorized rifle divisions, accounts for the difference we assess between peacetime and wartime manning for the total tank division. [REDACTED]

General Applicability of the Evidence

[REDACTED]

There is still some element of uncertainty introduced by a few pieces of conflicting evidence; some suggest even lower peacetime-to-wartime ratios, others higher ratios. Each is ambiguous in context and subject to varying interpretation. On balance, we do not find such evidence persuasive enough to refute the more explicit evidence discussed or the fact that most of our evidence—whatever its source—is consistent and supports the conclusions given here. [REDACTED]

Current Estimates: Nondivisional Forces

Most of our evidence on manning of Soviet forces in Central Europe concerns elements—usually subunits—of divisions. For these we can discern a structure, and we have some actual manning information. A lack of comparable evidence on Soviet nondivisional units in Central Europe prevents us from reaching conclusions with the same confidence. [REDACTED]

Table 5
US Estimate of Soviet Nondivisional
Manpower in the MBFR
Reduction Area, January 1983^a

Total	207,000
Combat units	64,000
Combat support units	48,000
Service support units ^b	95,000

[REDACTED]

^b Includes personnel in headquarters.

[REDACTED]

We group the nondivisional forces into three categories—combat, combat support, and service support. This order also reflects the quantity and quality of our evidence on nondivisional forces. It corresponds directly to our ability to discern the structure of the units in question, as well as our access to direct evidence on peacetime manpower. Our most recent, comprehensive estimate of Soviet manpower in these nondivisional forces is shown in table 5. [REDACTED]

[REDACTED]

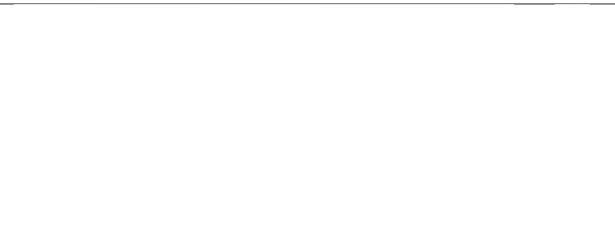
Combat Units

For nondivisional units, our best evidence is on the combat category. This category includes tube artillery, surface-to-surface missile, surface-to-air missile, air assault, independent tank and motorized rifle, and attack helicopter units. Our ability to discern the structure of many types of nondivisional combat units is critical to the relative confidence we place in our estimates of their manning. In some nondivisional combat units our understanding of structure is comparable to our understanding of the structure of divisions. [REDACTED]

Our understanding of the structure of subunits, units, and large units is the basis first of our estimates of the likely wartime strength of Eastern forces at all levels, built from estimates of manpower necessary [REDACTED]

[REDACTED]

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Of greater uncertainty is the peacetime manning. Here, too, structure is the key to our estimating methodology. Our understanding of structure permits us to build—from subunit evidence—estimates of the peacetime manning of larger units and aggregates on the basis of estimates of manning at the subunit level.



Two important assumptions govern our estimates of peacetime manning. One is that like units of the same echelon of the same arm or branch of service (*rod voysk*) would observe the same manning practices. For example, we would expect similarly equipped motorized rifle companies to be similarly manned. The other is that militarily acceptable ratios of peacetime-to-wartime manning derive in part from the degree of training necessary to function satisfactorily in a particular military specialty—the more demanding the skills, the higher the ratios.

On the basis of our ability to discern their structure and on these key assumptions, we estimate peacetime manning of nondivisional combat units with greater confidence than that for other nondivisional units. Moreover, some nondivisional combat units comprise subunits identical to combat subunits found in divisions, and we believe the detailed documentary evidence we have on such subunits applies directly to estimates of both divisional and nondivisional units (the artillery battalion is a prime example). Where comparable subunits are present, therefore, application of the first assumption guides our peacetime estimates.

In accordance with the second assumption, we judge that peacetime strength approaches intended wartime strength where special technical skills are required, as, for example, in the missile units. What we know of the manning of divisional missile units supports this judgment.

Table 6
Summary of Projected
Peacetime Manning Changes

Additions		Deletions	
Total	32,500 to 39,500		28,000 to 36,000
Structural expansion	24,500 to 31,500	Structural contraction	8,000
New units	8,000	Conversion, reequipping	8,000
		Withdrawal	12,000 to 20,000



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In sum, although we lack direct evidence on many nondivisional combat units and must rely on a few key assumptions in estimating their manning, these assumptions are informed from certain empirical evidence. Moreover, the totality of evidence we have acquired tends to validate our method—applying direct evidence on individual subunits to like subunits, linking manning levels to skill levels, and relying on our understanding of structure to build unit and aggregate estimates from subunit evidence.



Combat Support Units

Combat support forces include signal, engineer, chemical defense, intelligence, and reconnaissance units. We have less, and less definitive, information on nondivisional combat support units than on combat units.

Most combat support units use less of the kind of distinctive, crew-served equipment found in combat units. Consequently, although most such units can be identified, it is more difficult to assess their structure and manning. The uncertainties associated with the manning of nondivisional combat support units apply to the combat support units of divisions as well, although combat support units contribute only about

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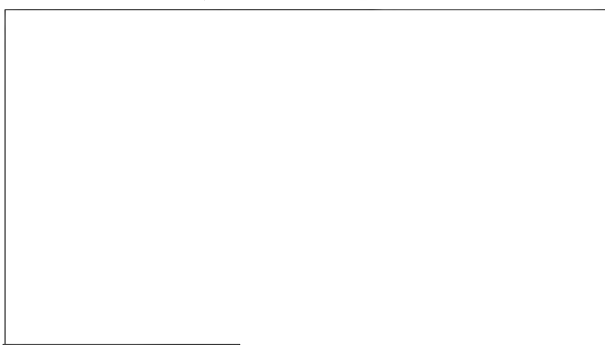
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10 percent of a division's overall manning, whereas they make up nearly a quarter of our estimate of nondivisional manpower. [REDACTED]

Many positions in combat support units require some particular skill and training and could not prudently be left to be filled by mobilization in wartime. Other skills, however, require less training or find a match in civilian activity and might successfully be filled quickly by reservists. Further, although combat support units perform needed functions in peacetime, the volume of this activity—in signal units for example—would increase dramatically in wartime. [REDACTED]

Service Support Units

We know least about the structure and peacetime manning of nondivisional service support units. The service support category comprises the rear services, including transportation (motor transport); repair and maintenance; medical, pipeline, and construction units; missile technical bases; and depots for ammunition, POL, and quartermaster and other supplies. It also includes miscellaneous support functions, such as postal, banking, laundry, and the basic *intendance* or housekeeping services. In the service support category we also include major headquarters, commandants' offices (*komendatury*), and training units. (There is some dispute over where to include the headquarters units, but there is no question that they fit with service support units in terms of our access to evidence on their structure and manning.) [REDACTED]



The size of service support units varies, but many are quite small, with fewer than 100 men. Consequently, a single garrison or barracks area may house several quite different service support units. Many may be colocated with combat or combat support units. In

some cases we are not able to locate and identify specific units, only functions; that is, there is no clear evidence within a larger formation of a particular unit performing a given support function, only evidence that the function is being performed. In such cases we must infer manning from function rather than from an understanding of structure. (In a few cases, we assume even the concept that a particular function is being performed on the basis of fragmentary evidence of Soviet practices elsewhere.) [REDACTED]

Our estimates of the number of soldiers in service support positions are further complicated by the presence of Soviet civilians who are employed by Soviet forces in Central Europe. These civilians should not count in our estimates of aggregate assigned strengths of service support units, and we attempt, within the limits of our evidence, to avoid including them. (See appendix A for a more complete discussion of this problem.) [REDACTED]

There also is some potential for confusing personnel in some service support units with division manpower. This problem centers on garrison support and training units. In both cases we have structured our estimates to avoid double-counting personnel in these functions. (See appendix B for a discussion of this problem.) [REDACTED]

Although the peacetime aggregate of service support units and associated manpower that we assess in Central Europe probably is adequate to support Soviet ground forces in Central Europe in peacetime, we believe a substantial expansion of service support would take place for wartime. Increased demands for support would be felt particularly in such functions as transportation, medical care, and repair and maintenance. [REDACTED]

In addition to bringing existing service support units to intended wartime strength, wartime expansion also would involve the formation of many additional support units. There is good evidence of the pre-positioning in Central Europe of equipment needed to expand the service support structure. This includes, in East Germany alone, some 15,000 to 20,000 excess trucks,

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equipment to form 65 mobile medical units, and some 87 battalion-sized mobile maintenance units. [REDACTED]

Nondivisional Forces in Wartime

Considering the augmentation necessary in service support, together with the number of men needed to bring nondivisional combat and combat support units to intended wartime strength, we estimate that a *minimum* of 60,000 to 70,000 troops and possibly as many as 100,000 to 120,000 would be needed to achieve a fully developed aggregate of nondivisional combat, combat support, and service support for wartime operations. [REDACTED]

Implications for Mutual and Balanced Force Reduction

Our revised estimates for Soviet divisions do little to resolve the discrepancy between Western estimates of Eastern forces and Eastern "official figures" in MBFR. Our new estimates of peacetime division manpower cut only about 12,000 from the next most recent (1982) aggregate division estimate and only about 2,000 from the aggregate division estimate we made in 1980—before the restructuring began and in the earliest stage of the unilateral Soviet withdrawal. The current US estimate of Soviet ground forces in the MBFR Reduction Area is 487,500. The Soviets acknowledge only 404,800, leaving a discrepancy of 82,700. [REDACTED]

The figure of 404,800 was tabled by the Soviets in September 1980. Given the pattern of previous data updates and their statements regarding the effects on manpower of the restructuring, we would expect no significant change in this figure if it were to be updated today. For example, in the 1980 update the Soviets changed their figure for ground forces from that previously tabled as valid for January 1976 only by the 20,000 men they publicly claimed to have just withdrawn unilaterally, plus another 1,500 men attributed to a "general reduction" since 1976. Their

figure for air forces did not change by a single man. Since 1980 the Soviets have insisted that their acknowledged restructuring has added no troops to the aggregate of Soviet forces in Central Europe. [REDACTED]

At the individual division level, although we believe that both the peacetime and intended wartime strengths have increased to some extent since 1980, intended wartime strength increased more radically than did peacetime strength, as some implied peacetime expansion was absorbed at the subunit level or offset by other elements of the restructuring. In aggregate terms, the withdrawal of one division to the Soviet Union since the 1980 estimate was made and the conversion of another division from the motorized rifle to the smaller tank configuration combine to reduce the difference between our current aggregate division estimate and that of 1980. [REDACTED]

The difference between the 1982 aggregate division estimate and the current estimate is greater because the 1982 estimate reflected peacetime increases from restructuring, but in more direct proportion to wartime increases than we now understand to be the case. The difference is less than might be expected, however, because the 1982 estimate represented an interim, less complete stage of the restructuring program. [REDACTED]

Although the new evidence reduces our estimate of peacetime division manpower, it gives us greater confidence in those revised estimates (and in turn in the estimates of some nondivisional units—particularly nondivisional combat units that have discernible structure and some subunits comparable to those found in divisions). Moreover, by strengthening the evidential base for our divisional manpower figures, the new information makes Eastern tabled figures all the less credible. [REDACTED]

The increased confidence in our division estimates and some past hints from Soviet representatives on their figures for divisions tend to isolate the source of the discrepancy in Soviet forces in the nondivisional categories. Subtracting our revised division totals

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Table 7
Elements of Peacetime Expansion

Expanded units/subunits
Motorized rifle
1. Motorized rifle battalion expands.
2. Motorized rifle company of tank regiments of divisions becomes battalion.
3. Motorized rifle battalion is added to independent tank regiments.
Artillery
1. Artillery battalion is added to tank regiments.
2. Artillery units of armies add one battalion.
3. Artillery batteries of nondivisional artillery battalions add two guns.
4. Artillery batteries of divisional artillery regiments add two guns.
5. Artillery batteries of artillery battalions of divisional maneuver regiments add two guns.
Army aviation
Helicopter detachments of divisions become squadrons.
New units/subunits
1. Air assault brigade, army battalions added.
2. Attack helicopter regiment added.
3. Two army artillery brigades added.

from Eastern "official figures" on total Soviet ground forces in the MBFR Reduction Area leaves only 125,000 to 135,000 of these official figures to account for Soviet nondivisional forces. This figure is improbably low; it is only just over half our estimate of all Soviet nondivisional forces. Moreover, in its entirety it exceeds our combined estimate of just the nondivisional combat and combat support units (112,000)—in which we have greater confidence—by only 13,000 to 23,000. This remainder is far too small to represent Soviet peacetime service support forces in Central Europe, even given our uncertainties in identifying individual units and monitoring structure. []

Change Over Time: Restructuring and Manpower

An extensive restructuring that began in 1980 among Soviet forces in Eastern Europe complicated the analytical task of relating standard organizational

Table 8
Elements of Peacetime Contraction

Motorized rifle units
1. Motorized rifle regiment of tank division loses one battalion.
2. 14th Guards Motorized Rifle Division converts to tank division.
Artillery units
Artillery regiment of tank division loses one battalion.
Tank units
1. Tank battalion of motorized rifle regiment of tank division loses nine tanks.
2. Tank subunits are reequipped with three-man instead of four-man tanks.

structures to manpower. All of the elements detected and associated with this restructuring to date are shown in tables 7 and 8. []

Three principal expansionary features of the restructuring affected motorized rifle and tank regiments and serve to illustrate some analytical distinctions we make in judging the effects of restructuring on peacetime manning levels. These three principal features are:

- The enlargement of motorized rifle battalions.
- The expansion of certain motorized rifle companies to battalions. (These are subordinate to tank regiments of tank divisions.)
- The addition of an artillery battalion to tank regiments.

The first of these changes affects primarily motorized rifle regiments, the last two tank regiments. []

These changes could be recognized and the progress of their implementation throughout the force monitored because they were reflected by the presence or absence in the affected regiments of certain types and numbers of distinctive pieces of equipment. (For example, the artillery was added to tank regiments, which until then had no organic artillery.) The more

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difficult analytical task was to translate these structural changes into changes in peacetime manning.

From our analysis of some direct evidence and the differing structural circumstances involved, we estimate that the following distinctions apply in the effect of these expansionary features on peacetime manning:

- Where expansion involved the enlargement of an existing subunit but without a change in its basic echelon (as in the case of the motorized rifle battalion enlargement), the regiment's peacetime manning remained unchanged.
- Where expansion involved the addition of a subunit of an arm of service not previously present in the regiment (the addition of artillery to the tank regiment) or the expansion of an existing subunit to a higher echelon (the expansion of the motorized rifle company to a battalion), the expansion probably did result in an increase in the regiment's peacetime manning.

Structural Expansion Without Manpower Increases ...

We initially assumed that, barring evidence to the contrary, increases in structure were accompanied by increases in manpower, not just for intended wartime strength but for peacetime assigned strength as well. The motorized rifle battalion both before and after restructuring, however, show that—at least in the case of the expanding motorized rifle battalion—this assumption was incorrect.

while the intended wartime strength of the motorized rifle battalion increased in proportion to the expanding structure, the peacetime assigned strength remained unchanged. The peacetime manning required by new structural elements was compensated for by reductions elsewhere in the battalion, so that manpower demands caused by structural expansion were resolved within the battalion itself (see figure 1).

Thus, with the restructuring, the battalion's peacetime manning became an even smaller percentage of its intended wartime strength, falling from just over 80 to about 70 percent. Figures 1 and 2 illustrate the

evolution of the structure and manning strengths for the total battalion since the early 1970s; figure 2 illustrates the evolution of manning for the subordinate motorized rifle company.

... and With Manpower Increases

We believe, however, that—in contrast with the situation in motorized rifle regiments—structural expansion in tank regiments *has* resulted in at least some increase in peacetime manpower.

This judgment is based on the fact that the structural expansion in tank regiments differs in several important respects from what has occurred in motorized rifle regiments. In the motorized rifle regiment, the expansion has been in the form of an enlargement of an existing subunit, without changing its basic echelon or makeup. The subordinate motorized rifle battalion was enlarged but remained a battalion. Further, the enlargement involved only one arm of service—motorized rifle—and was built on an existing subunit of that arm of service. The modest manpower needs of expanding components of the battalion could be accommodated by reducing the size of other components within the battalion itself.

In the tank regiment, however, the expansion included the addition of a subunit of an arm of service not previously present in the unit—artillery. There was no artillery base on which to expand, and the artillery subunit added was of battalion size.

* When compared with evidence acquired in the early and mid-1970s, the new evidence indicates that the peacetime manning of the motorized rifle battalion has remained essentially the same since the early 1970s. The peacetime manning of the parent regiment and division likewise may not have increased since the early 1970s. The evidence of the manning of various subunits of a motorized rifle regiment suggests that the current peacetime authorized manning for such regiments is about 1,900. This is about 300 fewer than previous estimates and matches the peacetime authorized strength on the motorized rifle regiment TO

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Moreover, although the expansion of motorized infantry in the tank regiment did build on an existing subunit—the motorized rifle company—the expansion involved raising the company to a new echelon—a battalion. The company was essentially replaced by a subunit more than three times its size. Once this had occurred, we would expect the new battalion to be manned at a level approximating the 70 percent or so of wartime manning at which other motorized rifle battalions with the Soviet forces in Central Europe are manned, which would require the assignment of more soldiers. []

Thinning out the parent unit—the tank regiment—would not be a reasonable source of the personnel needed for either the added artillery subunit or the expanded infantry subunit. Even if the problem of differing arms of service could be overcome, reducing the tank regiment's other components (mainly tank subunits) would result in reducing peacetime manning in these tank regiments to a level below that which the Soviets have maintained in tank regiments that do not have infantry attached. Reducing manning of tank subunits to provide slots elsewhere in the regiment also would severely limit the regiment's combat effectiveness. []

Structural Contraction

Although the Soviet restructuring at first seemed to involve only expansion, subsequent evidence indicates some structural contraction took place, saving about 8,000 personnel spaces. It centered on the tank divisions and included the apparent deactivation of one artillery battalion of the division's artillery regiment and one motorized rifle battalion of the division's motorized rifle regiment. These deactivations may be designed to provide some of the peacetime manpower slots necessary to man the related expansions. They are not necessarily the direct source of the individual soldiers to fill positions added elsewhere, because of the differing skills required by various military specialties. []

Withdrawal

Another factor in this complex pattern of structural change is the unilateral withdrawal of some Soviet forces from East Germany during 1979 and 1980. Although the Soviets claim to have withdrawn 20,000 servicemen from ground forces in East Germany, we

detected the withdrawal of complete units and subunits—all of which were combat or combat support units—with which we associated only about 12,000 peacetime manpower slots. The Soviets could have removed additional personnel that we did not detect, perhaps by removing some service support units or by thinning out some units. Either measure would have been difficult to detect. []

Net Effect of Post-1979 Activity on Manpower

Serious uncertainties are associated with our calculations of the net effect on peacetime manning of the changes that have occurred since 1979. Structural expansion, structural contraction, changes in manning ratios, the addition of some new units, and the Soviet withdrawal of forces from East Germany—all lead to an extraordinarily complex estimating problem. What we have learned of additional elements of expansion and contraction since 1981 makes us cautious about assuming that we have sufficient knowledge about the restructuring to measure its net effect on manpower. Nevertheless, having examined the structural changes on a case-by-case basis and having considered all available evidence, we estimate that, on balance, the ultimate *net* effect on the peacetime manning of Soviet ground forces in the MBFR Reduction Area of the restructuring and accompanying unit additions and deletions will be minor. Overall, the increases and decreases in peacetime slots since 1979 appear roughly to offset each other, and we expect this pattern to continue as the rest of the units are restructured. (See tables 6, 7, and 8 for a summary of the numbers on which this judgment is based and for lists of the elements of expansion and contraction involved.) []

The Soviets have acknowledged that they are undertaking a restructuring of their divisions in Central Europe, although they have insisted that they are accomplishing it without a net addition of manpower. They also claim, however, that the withdrawal during 1979 and 1980, which they treat as a separate subject, resulted in a net decrease of 20,000 men from these forces. Our calculations imply, however, that the withdrawal probably was an integral part of the

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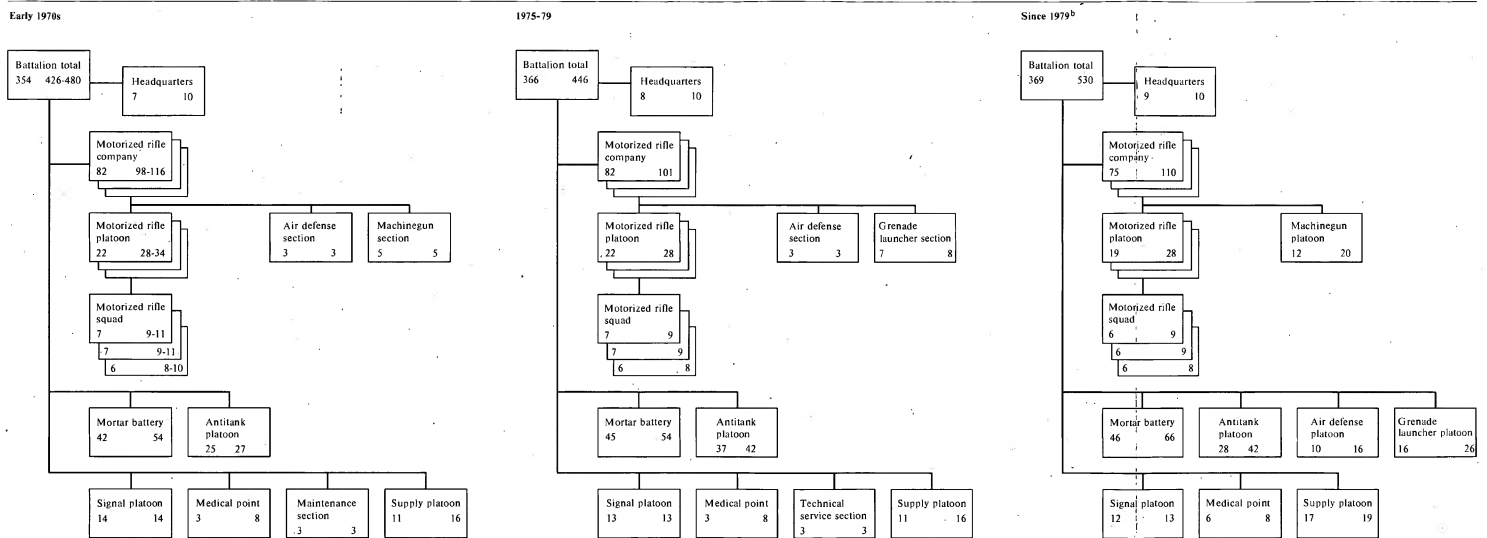
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Figure 1
Evolution of the BTR-60 Motorized Rifle Battalion Structure*



* Numbers on the left indicate peacetime manning; numbers on the right, wartime. The peacetime numbers are peacetime authorized strengths; where peacetime assigned strengths were known for specific times, they approximated the peacetime authorized strengths.

^b The principal structural changes in the battalion as a result of the 1980 restructuring are the separation of the air defense and grenade launcher sections from the company and their upgrade to platoons, the reestablishment of a machinegun element in the company (although as a platoon), and the expansion of the mortar battery from six to eight mortars. The compromises made in peacetime manning are in the motorized rifle

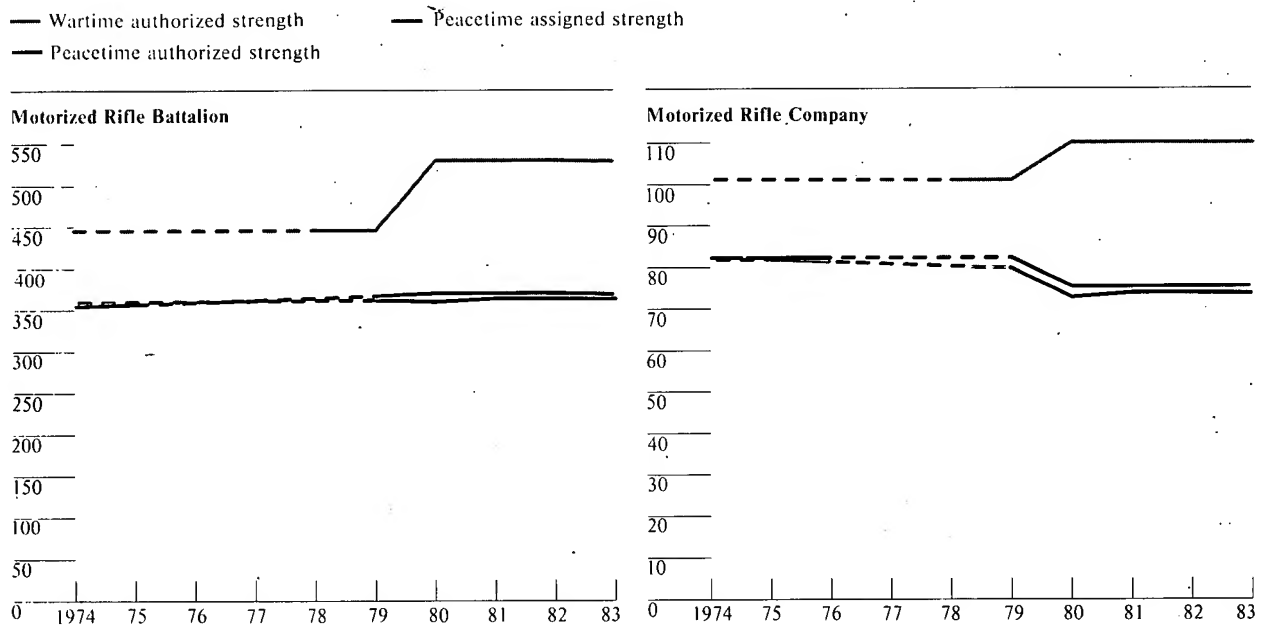
company, where the strength of the first and second squads is reduced from seven to six; in the antitank platoon, whose peacetime authorized strength drops from 37 to 28; and in the mortar battery, where the manning of each mortar section is reduced by one crewman to supply mortar crew to form the two additional mortar crews.

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Figure 2
Evolution of Soviet Manning, 1974-83



Note: Dashed lines are for years when no data is available.

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overall restructuring process, necessary to permit the saving of authorized personnel slots that could be reallocated to expanding units. [redacted]

One explanation for this pattern of apparently offsetting changes is that the Soviet commanders in Central Europe are operating under some kind of constraint that requires them to modernize unit structure but to accommodate new peacetime manpower needs from their own resources. The fact that the number of divisions was reduced through withdrawals concurrently with the expansion of the size of divisions is itself a strong indication that some manpower constraint has been in effect. If so, the authorized *wartime* strength of Soviet forces in Central Europe may expand in accordance with evolving tactical doctrine, technology, and organization theory, but *peacetime* strength of these forces would remain essentially unchanged. [redacted]

Monitoring Future Change

These conclusions suggest some additional implications for the monitoring of reductions and continued compliance with ceilings under a potential MBFR agreement:

- The best sources of direct evidence on Soviet manpower [redacted] cannot be relied on to provide continuity or wide coverage; they are not programmable, and the best information is acquired fortuitously. Even though some of our findings contradict the initial manpower inferences drawn from changing structure, we still must depend mainly on structural changes to indicate the possibility of manpower changes.

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- The nature of the sources on which we rely for evidence of structural change make it almost inevitable that we will detect increases much more readily than decreases. The less-than-rigid relationship between structural change and peacetime manpower in the changes since 1979 will raise the uncertainty of future inferences drawn from changing structure. This may in turn reduce the confidence with which intelligence analysts can judge the fact and size of reductions and continued compliance with manpower ceilings under a potential MBFR agreement. [REDACTED]

Implications for Readiness

Despite their reduced manning and, consequently, reduced readiness, the Soviets probably consider their divisions in Central Europe capable of combat operations in an emergency, even without augmentation or refresher training.³ The Soviets' behavior in earlier crises such as Czechoslovakia in 1968 and Afghanistan in 1979, however, suggests that they would, if possible, take time for thorough preparation of their forces before initiating war with NATO. Their military writings indicate that they expect a period of some days or even weeks of prewar international tension and warning that would allow time to do so. [REDACTED]

The Soviets apparently have tried to limit the impact that their reduced peacetime manning has on combat readiness by concentrating the vacancies in positions that they consider unskilled or not critical to the unit's peacetime function. Where we have direct evidence of the position-by-position differences between peacetime and intended wartime manning, the majority of unfilled positions authorized for wartime are those requiring the least skill. These are also positions in which an individual can be expected to perform adequately without having had recent, methodical training. Additional personnel could thus be introduced into the unit during mobilization. For example, [REDACTED]

motorized rifle subunits would receive riflemen, assistant grenadiers, and mortar crewmen in wartime. Artillery subunits would receive mainly gun crewmen, probably intended as ammunition handlers rather than gun operators. [REDACTED]

Other positions that are unfilled in peacetime are assistants and deputies—jobs the Soviets might regard as supplementary but not necessary in peacetime. Even some jobs requiring particular skills might be so categorized—for example, assistant platoon leaders of motorized rifle platoons, certain junior political officers, and supplementary medical and signal personnel. [REDACTED]

The effects of reduced manning may be most significant in the proficiency of subunits in the motorized rifle squads. Because of the number of slots authorized only for wartime and the practice of detailing some assigned riflemen to six-month training courses, motorized rifle squads train routinely in peacetime with 55 to 65 percent of their intended wartime strength. Thus some one-third to nearly half of the wartime squad will not have had recent, methodical training in integrated squad operations. [REDACTED]

Sources of Mobilization Augmentation

The evidence of lower peacetime manning levels in Soviet divisions in Central Europe implies a greater need for personnel augmentation before combat than we had recognized. We estimate that divisions alone would need 40,000 to 50,000 additional troops to reach full wartime strength. Nondivisional forces would need *at least* another 60,000 to 70,000 troops—and possibly many more—to fill out existing combat, combat support, and service support units and to man service support units to be created in wartime, some to be supplied with pre-positioned equipment. [REDACTED]

Potential sources of augmentation are:

- Mobilization of Soviet civilians employed by the Soviet army in Central Europe.
- Transfer of soldiers from Soviet units in Central Europe that are active in peacetime but either disband or cut back in wartime.

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- Mobilization or transfer of troops from the Soviet Union.

There is evidence that the Soviets have plans for this augmentation and that each of these sources plays a role in plans for achieving full combat readiness of their forces in Central Europe. []

[] the specific source of personnel to fill some but not all of the mobilization positions listed. In the motorized rifle battalion mobilization roster, for example, one position was to be filled in wartime by a Soviet civilian employee of the Soviet army. Another 13 positions were to be filled by women who worked in the PX system. The artillery battalion mobilization roster named eight mobilization personnel, one of whom was a woman. Also listed were four existing units, identified by military unit number, from which these mobilization personnel would come. Three of the four unit numbers had been detected previously in Central Europe, although the specific units could not otherwise be identified. The fourth had not previously been noted, either in Central Europe or in the USSR. []

[] the peacetime and wartime totals for the maintenance battalion of a Soviet motorized rifle regiment in Central Europe carried an annotation suggesting that some of the battalion's wartime augmentation was to come from the Belorussian Military District of the Soviet Union. []

In an exercise conducted in the 10th Guards Tank Division in February 1982, some mobilization personnel (including some women) were called up, and family evacuation points were established. []

It is difficult to judge how many wartime augmentees would be drawn from each of the three potential sources of mobilization augmentation, because our figures on those available from each source are not precise. We can say from the evidence available that augmentation from all three would be required to bring Soviet forces in Central Europe to full wartime strength and that even combat units would depend on some augmentation from the Soviet Union. We believe it likely that the needs of divisions alone would

exceed the numbers of reservists and potential transfers already in Central Europe. According to our current estimates, fewer than 20,000 troops would be potentially available from either of these sources already in Europe. []

Soviet Reservists in Central Europe. We have unambiguous evidence that most Soviet civilian employees of the Soviet army in Central Europe are reservists who would be mobilized to fill vacant positions. The evidence, however, is insufficient to estimate reliably their exact numbers. The most recent estimates of 20,000 to 24,000 Soviet civilians supporting Soviet forces in the MBFR Reduction Area included employed military dependents, who were difficult to distinguish from female reservists (see appendix A). []

Transfers From Within Central Europe. We estimate that fewer than 20,000 soldiers are assigned to units in the MBFR Reduction Area whose functions might cease or diminish in wartime. Such units include training units, some garrison including housekeeping services, the PX system, clubs, sports, theater and band ensembles, and so on. There are considerable uncertainties in estimating the numbers of soldiers assigned to these units in peacetime, as well as in judging the numbers who would actually be available to augment other units in wartime. Moreover, civilians who are reservists are involved in some of these functions. []

We estimate that most of the 6,000 soldiers who compose the training cadre of training units might be available to augment other units should mobilization occur. If they were used in this way, the training cadre would be separated from the training unit's equipment. That equipment would then be used to replace equipment lost in combat. Alternatively, the training cadre might remain with its equipment, to be used either as combat replacement packages or as the nucleus of new wartime units, which themselves would require substantial augmentation of personnel. []

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Augmentation From the USSR. Our estimates of the difference between peacetime and wartime manning and of the potential sources of available manpower indicate that most of the augmentation necessary to bring Soviet forces to full wartime strength must come from the USSR, either in the form of reservists mobilized to active duty or the transfer of soldiers (or units) already serving in Soviet forces in the Soviet Union. [REDACTED]

Timing Considerations

The extent to which the Soviets must resort to bringing personnel from the USSR to raise combat units to full wartime strength would make the greatest difference in the time Soviet forces in Central Europe would require to prepare for combat operations. The augmentation of forces in Central Europe with personnel from the USSR would entail assembling and processing these personnel in the USSR, moving them to Europe, and dispersing and integrating them into units and subunits there. However, the impact of this requirement on the total amount of time the Soviets would need to prepare their forces for combat is a complex issue beyond the scope of this paper.⁶ As indicated previously, we believe that the Soviets take a conservative approach to combat preparedness and, unless they perceived an urgent threat to their own security, that they would be likely to take as much time as possible to properly organize and perhaps even provide supplemental training to their mobilized divisions. [REDACTED]

Motivation for Current Manning Practices

Current Soviet manning practices in Central Europe may result from increasingly serious Soviet demographic problems. The number of Soviet males reaching draft age annually is declining, and current annual conscription requirements will exceed supply well into the 1990s.⁷ As the evidence cited in this

paper demonstrates, the ratio of peacetime to wartime strength of Soviet forces in Central Europe has dropped by at least a few percentage points as a result of the recent divisional restructuring, as some of the expansion in intended wartime strength has not been matched by increases in peacetime manning. That this drop in peacetime-to-wartime ratio has occurred even in Soviet forces opposite NATO may indicate a Soviet realization that manpower problems are becoming more acute. [REDACTED]

The Soviets could have drawn personnel from interior units to provide the troops necessary to keep manning levels in Central Europe closer to wartime strength. That they have not done so may reflect their view that the possibility of sudden hostilities in Europe is low and that weaknesses that stem from these manning practices are acceptable. The Soviets probably view the unreinforced posture of their forces in Central Europe as adequate for defensive operations (in the unlikely event of a NATO attack) and for such peacetime missions as deterring attack and establishing a presence that discourages overt expressions of East European disaffection. We doubt, however, that the Soviets would want to undertake unreinforced offensive operations from this posture. It is more likely—and their military writings indicate—that they count on any serious outbreak of hostilities in Europe being preceded by a period of increasing tension of sufficient duration to permit them to bring their forces to full wartime strength and full mission proficiency, either to respond to attack or to launch an attack at a time and place of their own choosing. [REDACTED]

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Appendix A

Soviet Civilians Employed by Soviet Forces in Central Europe

Soviet civilians are employed by the Soviet army in Eastern Europe in a wide variety of jobs. The most recent (1979) comprehensive work on this subject estimated there were 20,000 to 24,000 Soviet civilians supporting Soviet forces, both ground and air, in the MBFR Reduction Area. These figures included employed dependents of those on active military duty.⁸ Many of these civilians have served as soldiers in Soviet forces in Central Europe and have remained as civilians under extendable one-year contracts. [redacted]

[redacted]
[redacted] Most of these former soldiers remain in jobs—such as drivers and mechanics—similar to those they performed during active service.
[redacted]

[redacted] many
Soviet civilians also are employed by the Soviet army under longer term contracts, usually three to five years. These longer term civilians may serve as technicians, engineers, or as administrators at all levels. Others serve in skilled housekeeping positions as plumbers, electricians, stokers, welders, and firemen, or work in laundries, messhalls, and depots of all sorts. Most of these civilians are reservists, who would be mobilized in wartime. [redacted]

Some civilian women fill administrative and medical positions, and many are employed in clerical and service positions in the garrisons—for example, in the military sales store system (*voventorg*) similar to US post exchanges, military clubs, and libraries. [redacted]

[redacted] some
women are contract employees who are subject to

[redacted]
[redacted] DIA
Intelligence Appraisal DIAIAPPR 64-79 [redacted], March 1979,
East Germany: Civilian Employees of the Soviet Military. [redacted]

mobilization and would be used to fill out military units for wartime. Others, however, who are dependents of Soviet officers and noncommissioned officers, would be evacuated to the Soviet Union if circumstances permitted. [redacted]

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Appendix B

Potential for Confusion of Some Service Support Manpower With Division Manpower

There has been a suggestion that our assessment of the lower peacetime assigned strengths for divisions misleads in that it fails to take into account soldiers who might be counted by the Soviets against division authorizations but who serve in peacetime in garrison support functions or in training units. We examine each of these categories (both are subsets of the larger service support category) briefly to describe our understanding of their makeup and to demonstrate why we think our estimates correctly account for the soldiers in question. []

Garrison Support

Discussions of garrison support frequently confuse two different functions, those of the *komendatura* and those of garrison housekeeping services. The term *garrison commands*, which we choose to avoid, has been applied to both these functions []

Komendatury. The Soviets establish *komendatury*—town commandants' offices—in accordance with the disposition of Soviet forces in Central Europe in peacetime, under the centralized control of the Military Services Directorate (*otdel sluzhby voysk*) of the headquarters of Soviet forces in each host country. The offices function as military police headquarters and as the principal liaison office between the local civilian population and the Soviet military. []

Staffing of an individual *komendatura* depends on its location and geographic area of responsibility. []

[] estimated the Juterbog *komendatura* to have a staff of 10 to 15 officers and 15 to 20 enlisted men. []

[] estimated that there were 60 to 70 *komendatury* in East Germany, a figure that approximates the number of garrison towns. Using these numbers as a guide, we estimate that a total of about 2,500 Soviet military personnel are assigned to *komendatury* in Central Europe. []

We believe these personnel are permanently assigned to *komendatury* and not counted against division authorizations. Nor do we believe they would be transferred to divisions in wartime. In fact, *komendatury* have wartime functions that probably would prevent them from supplying significant numbers of transfers to other units. []

Garrison Services. As garrison services we include the full range of *intendance* or housekeeping services, as well as the staffing of clubs, PXs, and so on. A large part of what we consider garrison services is the responsibility of the Billeting Operation Service (*kvar-tirnoehkspluatatsionnaya sluzhba* or *kehs*). []

[] a Billeting Operation Service Directorate oversees garrison services. *Kehs* personnel may work in a regiment's garrison under the supervision of the regimental Deputy Commander for Rear Services. []

[] the *kehs* employs a great many civilians. In addition to the civilians, some soldiers may be permanently assigned to *kehs* units. Other soldiers may be detailed from garrison tenant units. Those peacetime rosters that indicate both the difference between peacetime assigned and present-for-duty manpower and the reasons for the difference invariably show at every level a substantial number of soldiers on work details. []

[] these details frequently involve housekeeping chores of the kind we include under garrison services. []

Any detailees are properly included in our estimates of the assigned strengths of their parent units. The civilians—as potential reservists—may be assigned to []

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divisions upon mobilization, and any soldiers permanently assigned to *kehs* units may be transferred to divisions in wartime. Neither would be properly counted in the estimates of a division's peacetime strength, however. Moreover, by no means would all personnel in garrison services become available to other units in wartime. Although their functions might diminish somewhat, there still would be a role for garrison services in any installation that remained under Soviet control in wartime. [REDACTED]

Training Units

Some students in training units clearly *are* carried on the rosters of other parent units while they are in training. To avoid the risk of double-counting students who are already counted in our estimates of line units, we count under training units only the training cadre (including those that operate training ranges), which we estimate at about 6,000. [REDACTED]

We are cautious about double-counting trainees in training units because we observed in [REDACTED] the motorized rifle companies that one rifleman position in two of the three squads of each platoon is annotated "in training." [REDACTED]

[REDACTED] some soldiers are included in the authorized levels of and formally assigned to combat units, even though they are in six-month training courses in one of the Soviet training units in Central Europe. These are generally conscripts in their first training cycle.⁹ During that time, they are trained to be specialists but will serve as riflemen should there be a general mobilization. Following completion of training, these soldiers are reassigned as appropriate to serve in their acquired specialty, replacing specialists who are discharged. [REDACTED]

This pattern does not obtain for tank subunits, which we note are manned at full strength in peacetime. However, it may be that some individuals in training units but counted as riflemen are training as tankers, intended to replace rotating tank crewmen in the subsequent training cycle. If so, their association with motorized rifle units could be limited to a mobilization liability while in training. This scheme would provide a mobilization pool for riflemen, while ensuring that tank subunits would be filled in consecutive cycles. [REDACTED]

⁹ The note on the 1976 roster that individuals had been in training since early December suggests that they arrived as new conscripts in November 1975 and took their basic training with the motorized rifle unit before departing for the specialist training unit. [REDACTED]

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